

In re Appln. of Yu et al.
Application No. 09/992,302

STATUS OF THE CLAIMS

No claim amendments are made herein. The current status of the claims is set forth below.

1.-13. (Cancelled)

14. (Previously Presented) A method of treating a set gypsum-containing material comprising:

applying to said set gypsum-containing material at least one member from each of the following types of inorganic phosphate salts: monobasic phosphate salts, trimetaphosphate salts, and acyclic polyphosphate salts having at least three phosphate units.

15. (Original) The method of claim 14, wherein the inorganic phosphate salts are applied in amounts sufficient to impart the set gypsum-containing material with an improvement, as compared with the untreated set gypsum-containing material, in at least one characteristic selected from the group consisting of strength, surface hardness, abrasion resistance, water erosion resistance, and combinations thereof.

16. (Original) The method of claim 14, wherein the trimetaphosphate salt is selected from the group consisting of sodium trimetaphosphate, potassium trimetaphosphate, calcium trimetaphosphate, sodium calcium trimetaphosphate, ammonium trimetaphosphate, lithium trimetaphosphate, and combinations thereof.

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17. (Original) The method of claim 14, wherein a composition is formed from the inorganic phosphate salts, which is then applied to the set gypsum-containing material.

18. (Original) The method of claim 17, wherein the composition comprises water.

19. (Original) The method of claim 18, wherein the composition is applied by way of spraying, dipping, spin coating, brushing, rolling, or combinations thereof.

20. (Canceled)

21. (Original) The method of claim 17, wherein the composition is further formed from a polymer selected from the group consisting of a water dispersible polymer, a water soluble polymer, and combinations thereof.

22. (Original) The method of claim 14, further comprising applying to the set gypsum-containing material a polymer selected from the group consisting of a water dispersible polymer, a water soluble polymer, and combinations thereof.

23. (Original) The method of claim 22, wherein the polymer is selected from the group consisting of acrylic latex, rubber latex, guar gum, sulfonated polystyrene latex, polyvinyl alcohol, polyvinyl acetate, and blends or combinations thereof.

24. (Original) The method of claim 14, wherein the monobasic phosphate salt is selected from the group consisting of monoammonium

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phosphate, monosodium phosphate, monolithium phosphate, monopotassium phosphate, and combinations thereof.

25. (Original) The method of claim 14, wherein the acyclic polyphosphate salt is soluble in water.

26. (Original) The method of claim 25, wherein the acyclic polyphosphate salt is selected from the group consisting of sodium hexametaphosphate having 6 to about 27 repeating phosphate units, potassium hexametaphosphate having 6 to about 27 repeating phosphate units, ammonium hexametaphosphate having 6 to about 27 repeating phosphate units, and combinations thereof.

27. (Original) The method of claim 14, wherein the monobasic phosphate salt is monoammonium phosphate, and the acyclic polyphosphate salt is sodium hexametaphosphate having 6 to about 27 repeating phosphate units.

28-30. (Canceled)

31. (Original) The method of claim 14, wherein the set gypsum-containing material comprises one or more fillers.

32. (Original) The method of claim 31, wherein the filler is selected from the group consisting of silica sand, hydrated lime, and blends or combinations thereof.

33.-36. (Canceled)